

Report Date: 01 Feb 2013

Summary Report for Individual Task

071-704-0001

Operate a Mini Eyesafe Laser Infrared Observation Set (MELIOS), AN/PVS-6

Status: Approved

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Condition: As a member of a squad, given the MELIOS, two BA-6516/U (nonrechargeable) or two BB-516/U (rechargeable) batteries, and all table of organization (TOE) weapons. You have been directed to operate the AN/PVS-6 mini eyesafe laser infrared observation set (MELIOS). Some iterations of this task should be performed in MOPP.

Standard: Prepare the AN/PVS-6 for operation, install batteries, conduct operation test, zero the AN/PVS-6, employ, and power down the AN/PVS-6, and operate the AN/PVS-6 under unusual conditions. Ensure the AN/PVS-6 operates without faults or malfunctions.

Special Condition: None

Special Standards: None

Special Equipment:

Safety Level: Low

MOPP: Sometimes

Task Statements

Cue: None

DANGER

None

WARNING

The AN/PVS-6 MELIOS Rangefinder incorporates a restricted eyesafe laser. Do not stare into the laser exit port.

CAUTION

None

Remarks: None

Notes: The AN/PVS-6 MELIOS is a lightweight, individually operated, handheld or tripod-mounted, laser rangefinder. It is capable of determining ranges from 50 through 9995 meters in five meter increments and displaying the range in the eyepiece. compass/vertical angle measurement (C/VAM) allows for an azimuth measurement and vertical angle measurement.

Performance Steps

1. Prepare the MELIOS for operation.

a. Remove the MELIOS from the carrying case.

b. Secure the MELIOS.

(1) Place the carrying strap around neck.

(2) Mount to tripod.

(a) Remove the tripod from carrying case.

(b) Open the tripod legs and secure tripod at the desired height.

(c) Place the tripod on a stable surface.

(d) Mount the MELIOS securely on tripod by aligning the mounting hole over the tripod screw and pad.

(e) Tighten the screw until the MELIOS is secure on the tripod pad.

2. Install the battery.

a. Ensure the mode switch is in the OFF position (Figure1).

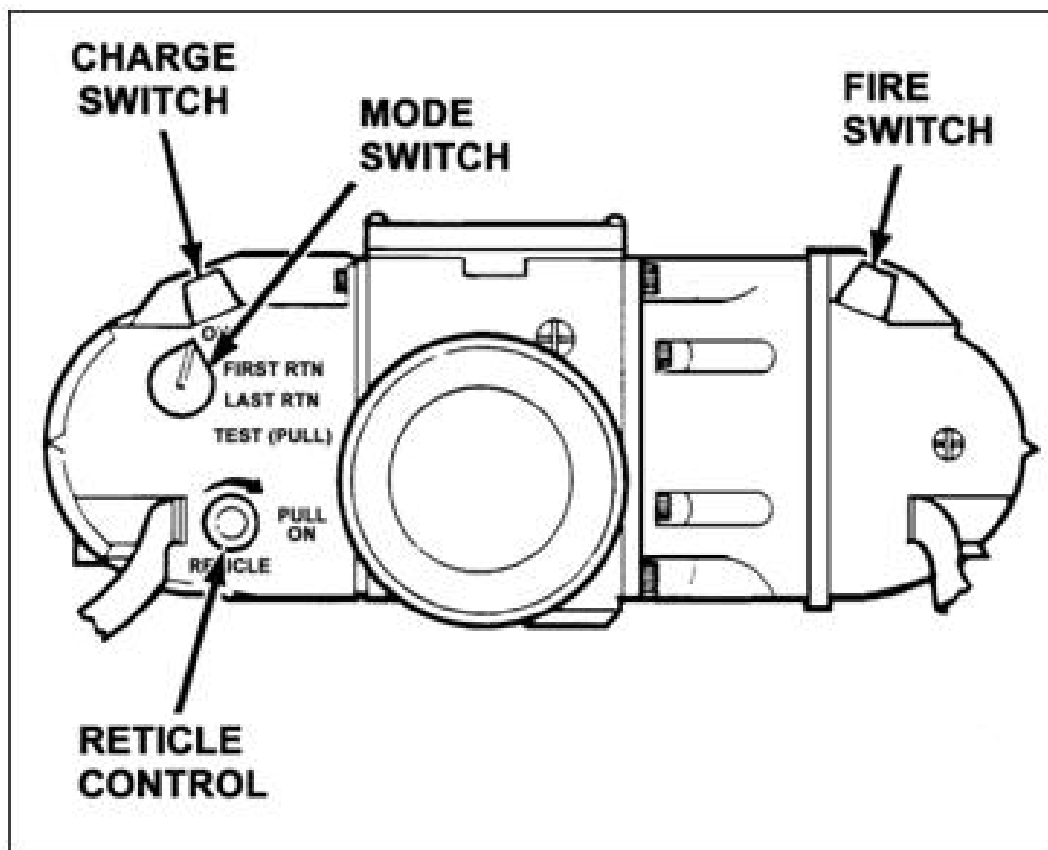


Figure 1. MELIOS controls.

b. Open the battery compartment door by turning screw bail counterclockwise.

c. Insert the battery with the small raised contact first (Figure 2).

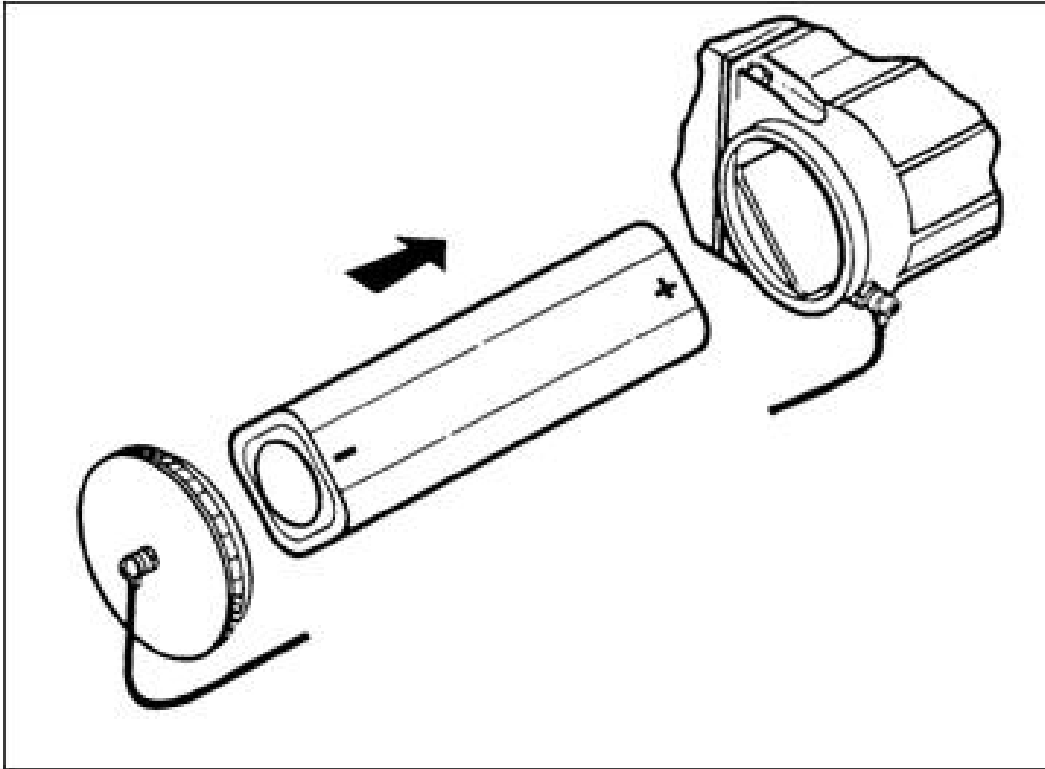


Figure 2. Battery replacement.

d. Close the battery compartment door by turning the screw clockwise.

3. Conduct an operation test of the MELIOS, as required.

a. Rotate the front lens cap away from the objective lens and laser window.

b. Pull the eyeshield plug out of eyeshield.

c. Adjust the diopter setting for clear focus.

d. Turn the mode switch to TEST.

e. Press the charge switch.

f. Observe the display through eyepiece lens for all elements and indicators to be lit.

g. Press the fire switch.

h. Turn the mode switch to FIRST RTN or LAST RTN.

i. Press the charge switch.

j. Observe the display for ready indicator (Figure 3).

Note: If the ready indicator light does not come on three seconds after the charge switch is pressed, a possible malfunction has occurred.

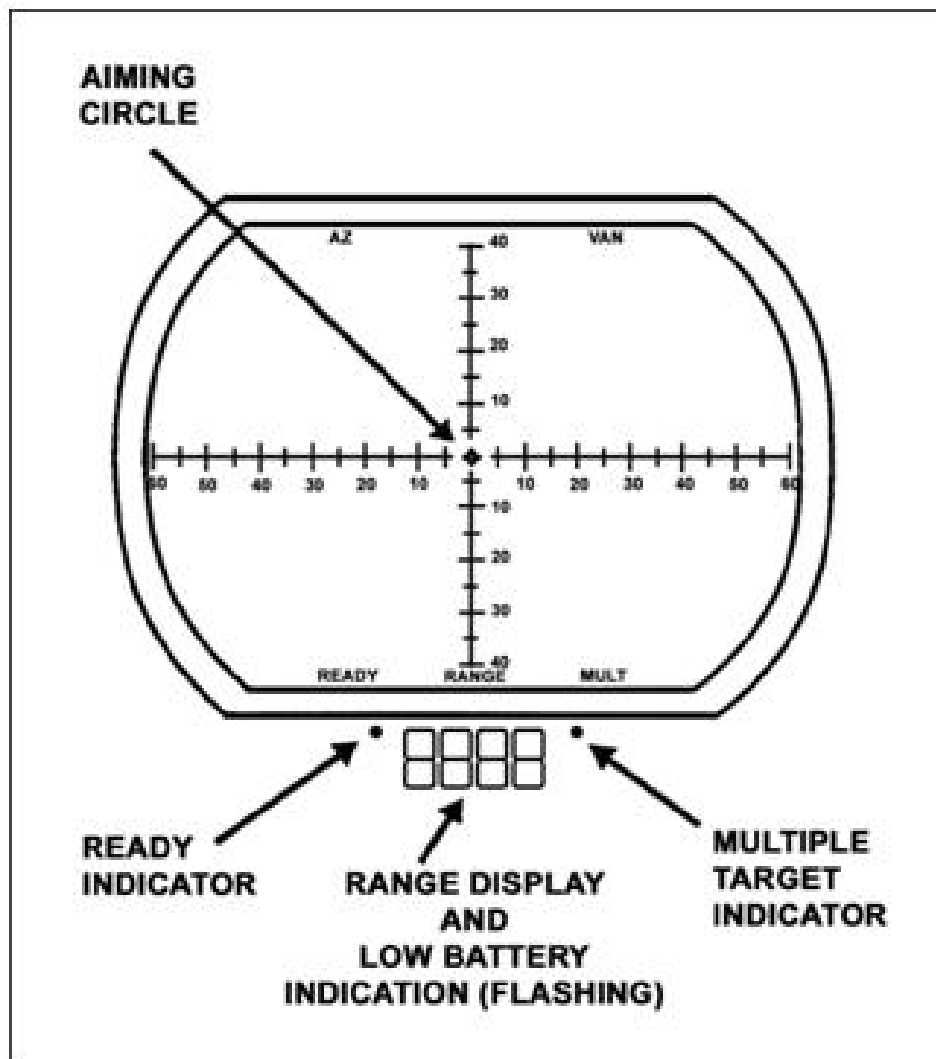


Figure 3. Eyepiece display.

k. Aim at a target at a distance of 50 meters or greater.

l. Press the fire switch.

m. Observe the display for range value.

Note: If there is no range value displayed one second after fire switch is pressed, a possible malfunction has occurred.

n. Adjust the reticle brightness.

Note: If reticle does not illuminate or the target cannot be seen clearly a possible malfunction has occurred.

(1) Press the charge switch.

(2) Pull out the reticle control.

(3) Rotate to the desired brightness level.

o. Set the C/VAM mode switch to "C/VAM" to place the C/VAM in the standby mode.

p. Press the charge switch.

q. Observe the upper C/VAM standby display (four "dashes").

Note: If a banking display appears, reposition the MELIOS to a more level position. The display will go out after 10 seconds.

r. Press the charge switch again to reactivate the charge switch.

Note: If "FAIL" appears in the display, go to troubleshooting procedures.

s. Press the fire switch.

t. Observe the upper C/VAM display for alternating AZ and VAM indications.

Note: The display will alternately display the target azimuth and elevation angles in mils or degrees for two times each.

4. Zero the MELIOS (as needed).

Note: Conduct zero procedures if the C/VAM if the MELIOS has been relocated more than 100 miles from the last location it was zeroed and whenever a battery has been removed or replaced. Zeroing is accomplished by firing the laser twelve times with the MELIOS in three different positions at each of the four main compass azimuth positions. The compass azimuth positions are not critical and may be within $\pm 20^\circ$ (± 355 mils) of the C/VAM azimuth display indication.

a. Rotate the front lens cap away from the objective lens and laser window.

b. Pull the eyeshield plug out of eyeshield.

c. Adjust the diopter setting for clear focus.

d. Turn the MELIOS mode switch to FIRST RTN.

e. Press the charge switch.

f. Observe the READY indicator lights.

g. Press the fire switch.

h. Repeat steps e, f, and g three times.

i. Turn the C/VAM mode switch to ZERO.

j. Press the charge switch.

k. Observe the READY indicator and C/VAM standby display (four "dashes") lights.

l. Acquire the 12 zeroing measurements by firing the MELIOS 12 times from each of the four cardinal directions using the listed tilt and bank positions (Figure 4).

#	AZIMUTH	TILT	BANK
1	NORTH	LEVEL	LEVEL
2	NORTH	UP	LEFT
3	NORTH	DOWN	RIGHT
4	EAST	LEVEL	LEVEL
5	EAST	UP	LEFT
6	EAST	DOWN	RIGHT
7	SOUTH	LEVEL	LEVEL
8	SOUTH	UP	LEFT
9	SOUTH	DOWN	RIGHT
10	WEST	LEVEL	LEVEL
11	WEST	UP	LEFT
12	WEST	DOWN	RIGHT

Figure 4. Zero measuring positions.

(1) Point MELIOS in the indicated direction with the appropriate tilt and bank.

(2) Press Fire Switch while holding the MELIOS as steady as possible until C/VAM display lights.

(3) Observe C/VAM display.

Note: If "ERO#" is displayed then repeat measurement of that firing position.

(4) Proceed to the next zeroing measurement position.

m. Observe C/VAM display, dashes move back and forth across display after twelfth successful measurement.

Note: Display continues flashing dashes for up to five minutes while compensation constant is calculated.

n. Observe blank display to indicate calculation is complete.

o. Press charge switch.

p. Observe C/VAM display for results.

Note: Display of "ql"(good) - Accuracy better than 10 mils. Display of "Ac15". . . "AC95" - Accuracy f15. 95 mils, repeat zeroing procedure. Display of "Ac-" - Calculation procedure failed, repeat zeroing procedure. Display of "FAIL" - C/VAM malfunction, return to unit maintenance.

q. Move C/VAM mode switch to C/VAM position, if displayed accuracy is acceptable.

5. Employ the MELIOS.

a. Turn MELIOS mode switch to the proper ON POSN based on target visibility.

(1) Turn MELIOS mode switch to FIRST POSN for a clearly visible target.

(2) Turn MELIOS mode switch to LAST RTN POSN for a partially obscured target (trees, smoke, etc.).

b. Set the C/VAM mode switch to C/VAM to place in standby mode.

c. Place reticle aiming circle on target.

d. Press the charge switch.

Note: If you do not range a target in eight seconds after the Charge Switch is pressed, the MELIOS will shut down and you will have to press the Charge Switch again.

e. Observe the C/VAM standby display (four "dashes").

Note: Reposition the MELIOS to a more level position if a banking display appears.

f. Hold aiming circle steady on target.

g. Fire the laser by pressing and holding the fire switch.

h. Read "Range" at bottom of display.

i. Release Fire Switch.

j. Observe the results.

(1) Observe upper C/VAM display for alternating AZ and VAM indications.

(2) Display the same indications by pressing and holding the fire switch again.

(3) Display the same indications continuously by pressing and holding the fire switch continuously.

k. Continue mission.

(1) Press charge switch to begin a new measurement cycle.

(2) Conduct power down procedure if ranging operations are complete.

6. Power down the MELIOS.

a. Turn mode switch OFF.

b. Press reticle control in.

c. Turn C/VAM mode switch OFF.

d. Rotate lens cap over objective lens and laser window.

e. Place eyeshield plug in eyeshield.

f. Remove the MELIOS from around the neck or,

g. Remove MELIOS from tripod.

(1) Release tripod height adjustment lock.

(2) Withdraw shaft and lanyard from leg mount.

h. Remove battery.

i. Return all equipment to the carrying case.

7. Operate under unusual conditions.

Note: Operating the MELIOS during adverse weather or battlefield conditions may adversely impact ranging distance, but should not affect C/VAM accuracy as long as the target is visible in the field of view. Adverse conditions are defined as smoke, dust, fog, heavy rain, snow, and degraded visibility.

a. Operate under extreme cold conditions.

Note: Extreme cold will shorten battery life. The BA-6516/U is the preferred battery for extreme low temperature operation.

(1) Keep spare batteries in your inner pockets to keep them warm.

(2) Wipe off condensation after the AN/PVS-6 has warmed up when brought from cold to warm.

b. Operate under chemical, biological, radiological, and nuclear (CBRN) conditions.

Note: Do not use DS-2 for decontaminating the MELIOS.

(1) Decontaminate AN/PVS-6 using a 5% sodium hypochlorite solution.

(2) Rinse by wiping with hot (158°F) soapy water.

(3) Dry metal parts.

(4) Wipe metal parts with oil.

(Asterisks indicates a leader performance step.)

Evaluation Preparation: SETUP: Provide the Soldier with the equipment and/or materials described in the conditions statement.

BRIEF THE SOLDIER: Explain what is expected of the Soldier by reviewing the task standards. Stress to the Soldier the importance of observing all cautions, warnings, and dangers to avoid injury to personnel and, if applicable, damage to equipment.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Prepared the MELIOS for operations.			
2. Installed batteries.			
3. Conducted an operation test of the MELIOS (as needed).			
4. Zeroed the MELIOS (as needed).			
5. Employed the MELIOS.			
6. Powered down the MELIOS.			
7. Operated under unusual conditions, as required.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	TM 11-5860-202-10	OPERATORS MANUAL FOR MINI EYESAFE LASER INFRARED OBSERVATION SET (MELIOS) AN/PVS-6 (NSN 5860-01-350-8551) (EIC: N/A)	No	Yes

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects.

Safety: In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, NBC Protection, FM 3-11.5, CBRN Decontamination. Everyone is responsible for safety. A thorough risk assessment must be completed prior to every mission or operation.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
101-92Y-0006	Inspect Equipment for Accountability, Cleanliness, and Serviceability	101 - Quartermaster (Individual)	Approved
071-704-0002	Maintain a Mini Eyesafe Laser Infrared Observation Set (MELIOS), AN/PVS-6.	071 - Infantry (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
071-000-0005	Prepare a Range Card for a Machine Gun	071 - Infantry (Individual)	Approved

Supported Collective Tasks :

Task Number	Title	Proponent	Status
07-3-9016	Establish an Observation Post	07 - Infantry (Collective)	Approved

ICTL Data :

ICTL Title	Personnel Type	MOS Data
Armor 2LT	Officer	AOC: 19B, Rank: 2LT
Cavalry Scout, SL1	Enlisted	MOS: 19D, Skill Level: SL1
19D10 Calvary Scout, Version 1.00	Enlisted	MOS: 19D, Skill Level: SL1

11B10, Infantryman - Version 1.00	Enlisted	MOS: 11B, Skill Level: SL1
19A Officer Lieutenant, Version 1.00	Officer	AOC: 19A, Rank: 1LT
11A Officer Lieutenant, Version 1.00	Officer	AOC: 11A, Rank: 1LT